

REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-6 and 8-14 are currently pending in this application, Claims 2 and 8 having been amended to correct self-evident informalities, and Claim 7 having been previously canceled. No new matter is added and no new search is required.

In the outstanding Office Action, Claims 1-6 and 8-13 were rejected under 35 U.S.C. §103(a) as unpatentable over Ikeda et al. (U.S. Patent No. 6,204,881, hereinafter Ikeda) in view of Takiguchi et al. (U.S. Patent No. 4,797,747, hereinafter Takiguchi); and Claim 14 was rejected under 35 U.S.C. §103(a) as unpatentable over Ikeda in view of Takiguchi and Gallegos et al. (U.S. Patent No. 5,166,598).

There are three basic requirements for a *prima facie* case of obviousness, (1) there must be some suggestion or motivation to modify the reference or to combine the reference teachings, (2) there must be a reasonable expectation of success, and (3) the prior art reference must teach or suggest all the claim limitations.

With respect to the rejection of independent Claim 8 as unpatentable over the combination of Ikeda and Takiguchi, Applicant respectfully traverses the rejection because Ikeda and Takiguchi do not teach or suggest every element of independent Claim 8.

Ikeda does not teach or suggest “if the first amplitude $A_{j1}(t)$ is smaller than the threshold value, memorizing the value of the amplitude $A_{j1}(t)$ and a corresponding instant t , where t is time; if the first amplitude $A_{j1}(t)$ is greater than the threshold value, then memorizing the value $A_{j2}(t)$ and corresponding instant t , where t is time” of independent Claim 8.

Ikeda only describes the use of level adjusting means for calculating average luminance levels respectively for the plurality of images using digitized image data, except

for digitized image data which satisfies predetermined conditions for each of the plurality of images. Luminance levels of the image data of the plurality of images is adjusted on the basis of the average luminance levels. This does not describe or suggest that threshold values are used to select the amplitude $A_{ji}(t)$ of a signal to be used to obtain the signal.

Takiguchi does not cure the deficiency in Ikeda. Takiguchi only describes a streak camera and does not describe or suggest that threshold values are used to select the amplitude $A_{ji}(t)$ of a signal to be used to obtain the signal.

Thus, Applicant respectfully submits that independent Claim 8 (and Claims 9-14) patentably distinguish over Ikeda and Takiguchi, alone or in combination. In addition, Applicant respectfully submits that independent Claim 1 (and Claims 2-6) patentably distinguish over Ikeda and Takiguchi, alone or in combination, for at least the reasons stated for Claim 8.

Furthermore, it is respectfully submitted that in light of the teachings of Ikeda and Takiguchi, one of ordinary skill in the art would have lacked the motivation to combine these references, especially since the proposed modification of Ikeda would render Ikeda unsatisfactory for its intended purpose.

Ikeda is directed to an apparatus for enlarging the dynamic range of an image. Ikeda describes increasing the dynamic range of an image by sensing the image at two different exposures, processing the data, and then combining the two images.

Ikeda describes the image sensing devices as CCD devices. The CCD devices allow the incoming light to be converted to an electrical signal. The electrical signal is then processed by an A/D converter to generate digital data. The digital data is processed according to an algorithm, and an image is produced that is identical to the original image, except that the new image has a wider dynamic range.

Ikeda describes that compression, a step performed according to the algorithm for increasing dynamic range, yields image data having the luminance level that is approximately the same as that of the standard image data.¹ Ikeda further states that “adjusting luminance levels of the respective image data before combining yields a natural image which has a balanced luminance.”

Thus, Ikeda requires image sensing devices that will function in conjunction with an apparatus that reconstructs an image. Furthermore, because Ikeda reconstructs an image, the image sensing device must also capture image characteristics such as luminance, frequency, color, size, resolution, pixel location, time information, etc.

Takiguchi teaches a streak camera, which is a device for converting time information from a luminous event into spatial information.² Streak cameras operate by converting a light signal into an electron beam. The electron beam sweeps across a phosphorus screen. A camera records the movement of the sweeping electron beam.³ The movement of the electron beam corresponds to variations in amplitude of the input signal over time. Thus, a streak camera only provides information about the amplitude of the input signal. Information about the amplitude alone is insufficient to reconstruct an image.

A person of ordinary skill would not replace the CCD image sensing devices of Ikeda with the streak camera of Takiguchi because streak cameras are not capable of obtaining the necessary information to reconstruct an image. However, if a streak camera were used with the apparatus taught by Ikeda, the modified apparatus would be unsatisfactory for its intended purpose.

MPEP §2143.01 states:

If the proposed modification would render the prior art invention being modified unsatisfactory for its intended

¹ Ikeda, col. 10, lines 61-64.

² Takiguchi, col. 1, lines 12-13.

³ Takiguchii, col. 4, lines 21-29, and Specification, page 1, lines 17-27.

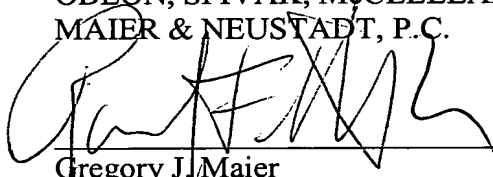
purpose, then there is no suggestion or motivation to make the proposed modification.

Therefore, Applicants respectfully submit that Ikeda in view of Takiguchi cannot render the claims *prima facie* obvious because modifying Ikeda in accordance with Takiguchi would render Ikeda unsatisfactory for its intended purpose. Accordingly, Applicants respectfully submit that Claims 1-6 and 8-14 patentably distinguish over the combination of Ikeda and Takiguchi. Furthermore, Gallegos et al. does not cure any of the above-noted deficiencies of Ikeda or Takiguchi.

Consequently, in light of the above discussion, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Gregory J. Maier
Attorney of Record
Registration No. 25,599

Customer Number

22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 06/04)

Raymond F. Cardillo, Jr.
Registration No. 40,440